



2007

World Direct Reduction Statistics

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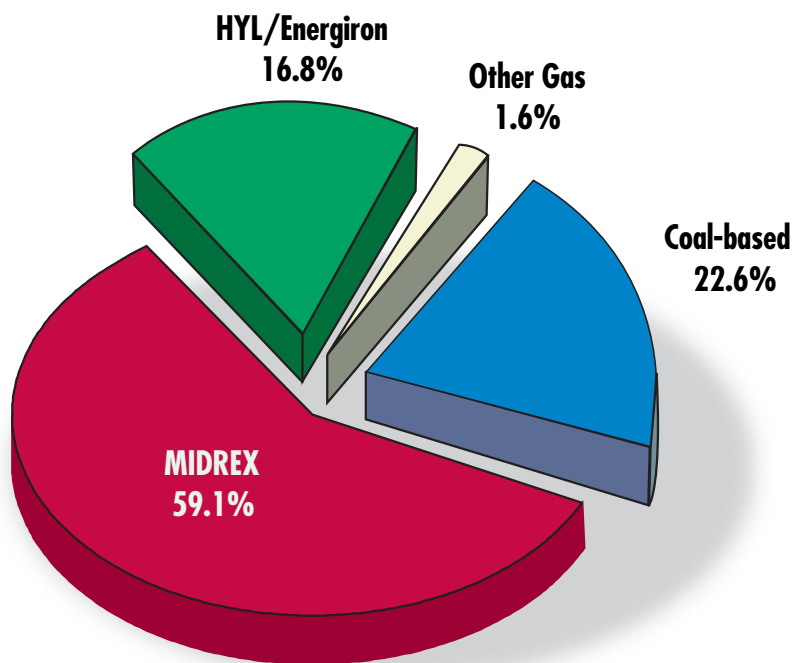
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2007 World DRI Production by Process



**Total World Production
67.22 Mt**

	2006	2007
MIDREX	59.7%	59.1%
HYL/Energiron	18.4	16.8
Other Gas	2.2	1.6
Coal-based	19.7	22.6

Source: Midrex Technologies, Inc.

DRI Production Experiences Growth Surge in 2007

2007 marked the beginning of a new surge of growth for the direct reduction industry. Total world production increased by more than 12 percent to 67.22 million tons.

A number of new plants began operation, particularly in the Gulf Region and in India. Also, the largest HBI module yet constructed, the LebgOK II MIDREX® Plant, started up at Gubkin in Russia.

Cumulative MIDREX® DRI production passed the half-billion ton mark in 2007; the MIDREX® Direct Reduction Process led the way for the 29th consecutive year with 39.7 million tons. Current growth rates are so high that the next half-billion tons of MIDREX® Iron is expected within only eight additional years, by 2015. Following the MIDREX Process, the next largest was the combined production of the rotary kiln, coal-based processes. All together, they made nearly 15 million tons. HYL/Energiron plants generated 11.3 million tons. All others accounted for 1.3 million tons.



India continued to lead all nations, making over 19 million tons of DRI, of which nearly 70 percent, 13 million tons, were produced in kilns.

Venezuelan production, strongly impeded by the constraint of an insufficient pellet supply, was second with 7.7 million tons, closely followed by rapidly growing Iran, which made 7.4 million. Mexico, Saudi Arabia, Trinidad, Russia and Egypt followed at 6.3 Mt, 4.3 Mt, 3.5 Mt, 3.4 Mt and 2.8 Mt respectively. Together, these eight nations accounted for over 80 percent of the world total.

The pellet shortage in Venezuela was symptomatic of limitations experienced elsewhere. The remarkable growth of many national economies led toward restrictions of raw materials in a number of areas. Most notable was supply of iron ore, but natural gas, electricity and spare parts and equipment supply situations were quoted as slowing production at various facilities worldwide.

FORCES AFFECTING THE INDUSTRY

POSITIVE: Extraordinary Demand

- **Demand Exceeding Supply** – Throughout the world, steel industry supply was clearly insufficient to fulfill demand as prices rose continuously on almost all iron and steel related products.
- **Availability** – At least 16 of the MIDREX Modules exceeded 8,000 hours of operation.

NEGATIVE: Supply Availability and Costs of Raw Materials

- **Ore Supply** – Around the world, increasing tightness in supply of iron ore impinged on growth of the steel industry. Few places were more heavily affected than Venezuela, where inadequate supplies of ore and specifically pellets caused most of the DR plants to limit production. By 1st quarter of 2008, this situation limited Venezuelan DRI production to less than 70 percent of proven capacity.
- **Ore Costs** – As supply tightened, the cost of ore continued to rise. Typical ore prices were more than 160 percent higher than only four years prior.
- **Natural Gas Costs** – Gas costs, too, continued their worldwide escalation.
- **Freight Costs** – Whether by ship, barge, rail or truck, freight costs skyrocketed. In November, the Baltic Dry Index (a measure of the time value of a dry bulk cargo vessel) was 367 percent above where it had been 18 months earlier.

NEW CAPACITY AND PLANTS UNDER CONSTRUCTION

Midrex - Five modules began operation in 2007:

- **Qatar Steel Module 2** – July; capable of producing either DRI or HBI and rated at 1.5 million tons per year.
- **Hadeed Module E** – July; the first 7.15 meter diameter MIDREX®

Shaft Furnace, rated at 1.76 million tons per year, was by the end of the year undergoing trials of delivering hot DRI to the adjoining arc furnace.

- **Lebedinsky GOK Module 2** – October; capable of producing 1.4 million tons per year of HBI.
- **DRIC** – May and December; the two modules that were relocated from Mobile, Alabama to Damman, Saudi Arabia by the Al-Tuwairqi group resumed operation at their new site.
- **Under Construction** – Seven Midrex Plants were in various stages of construction; four in Iran, and one each in Malaysia, Oman and Pakistan.

HYL/Energiron - One module remodeled and restarted:

- **Vikram Ispat** – December, 2006; the module at Vikram Ispat was remodeled and had re-initiated operation in December, 2006, but was not reported here.
- **Under Construction** – Four modules were under construction; three in Abu Dhabi, scheduled for start-up in 2008, 2010 and 2011, and one in Egypt, scheduled for 2010. In addition the Sidor 2 plant was being remodeled.

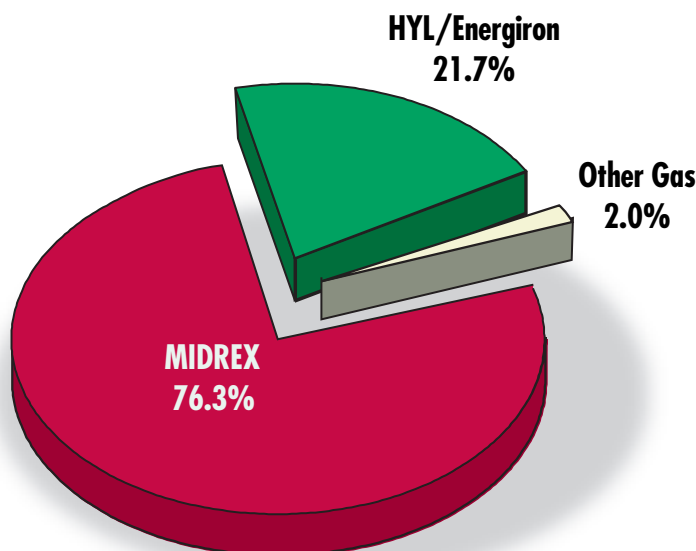
Rotary Kilns:

- Enormous growth was experienced in this technology within India. It is believed that nearly 100 kilns, representing three million tons per year of DRI, were brought on line during 2007 and that a similar number were under construction. Typically, individual kilns have a capacity of about 25 to 50 thousand tons per year.

FURTHER OUTLOOK

By the time of this writing, May 2008, the prices for iron and steel were at previously unseen levels. These prices formed conditions for very rapid, continued growth in the industry.

2007 World Gas-based Production by Process

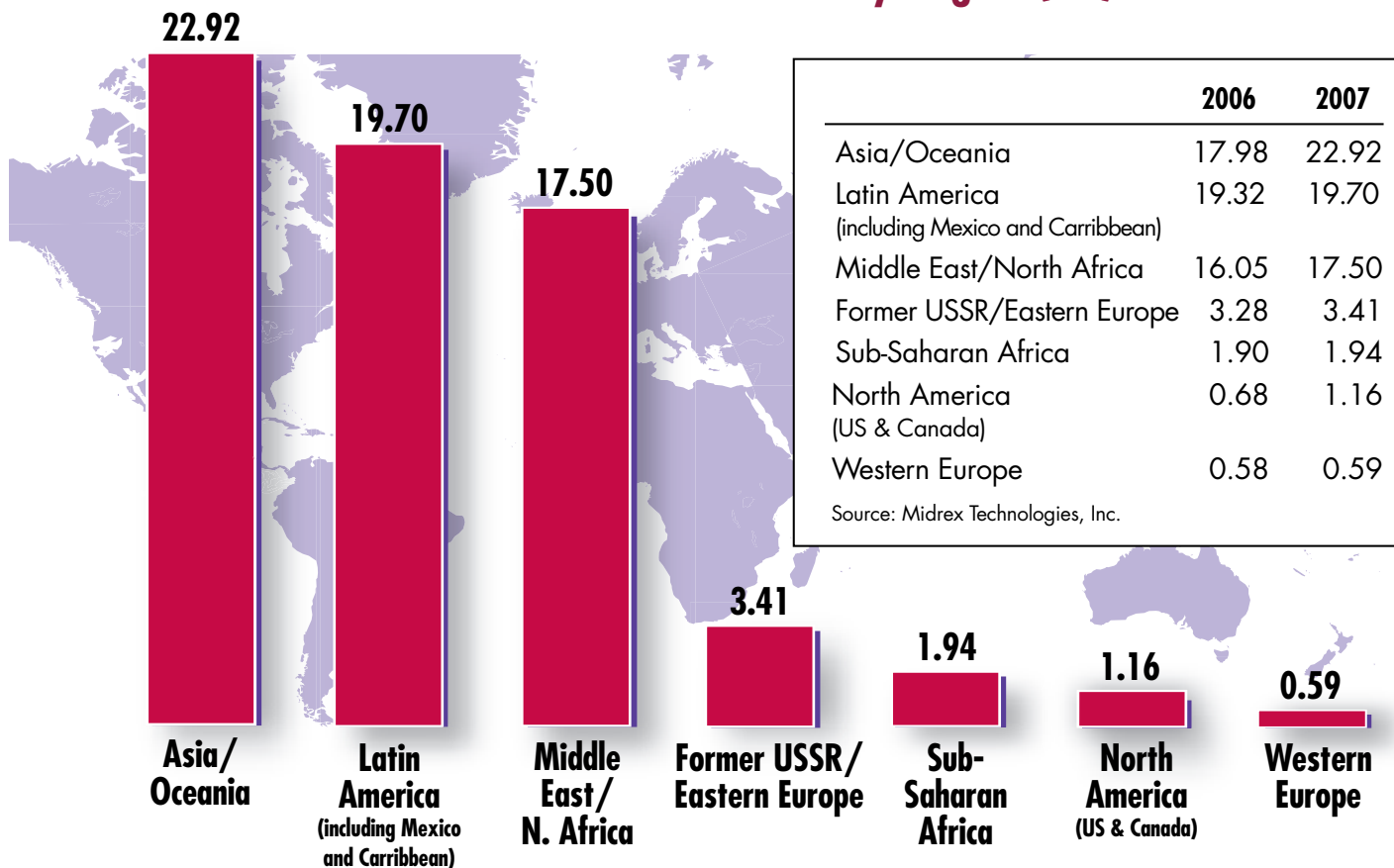


Total World Production 52.07 Mt

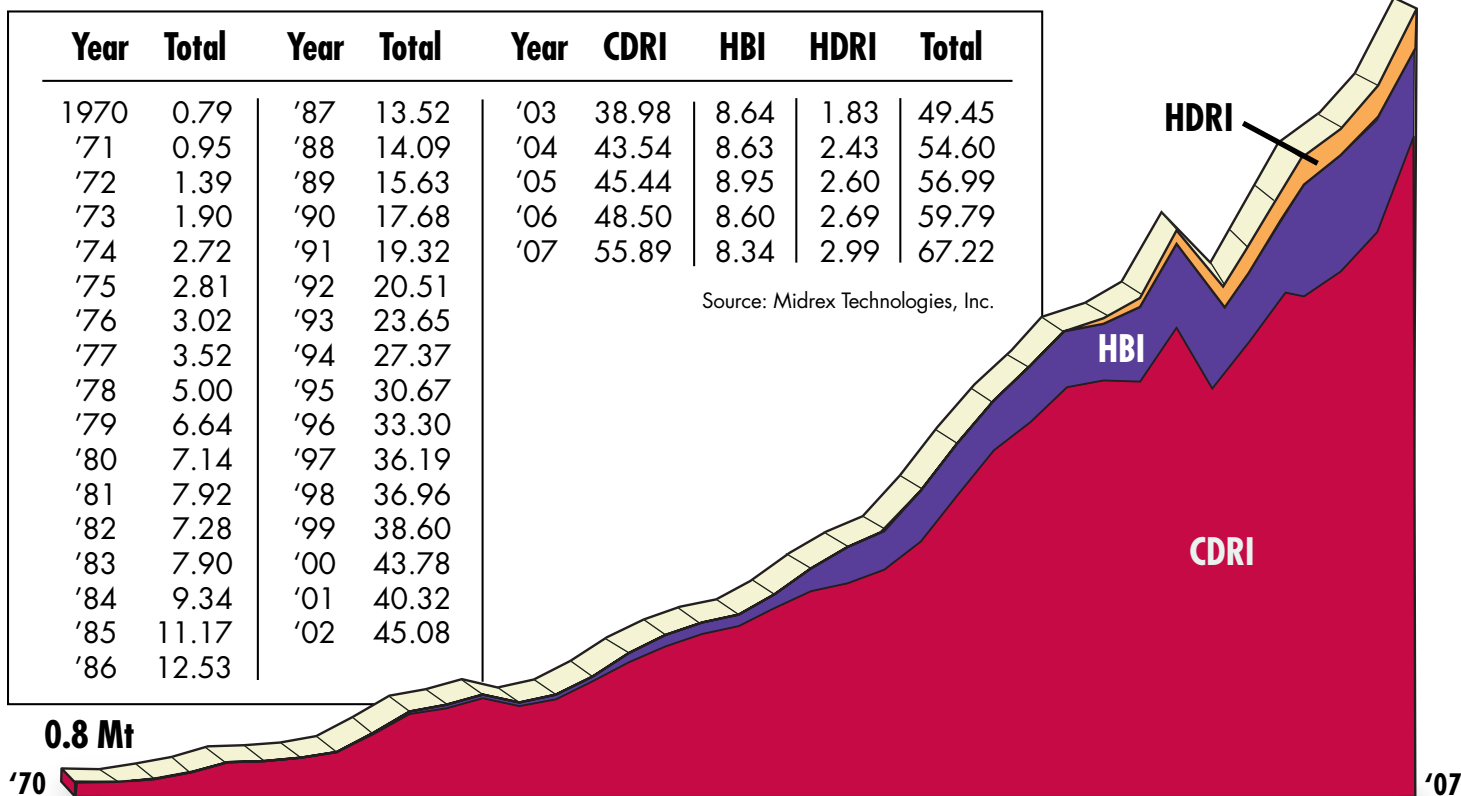
	2006	2007
MIDREX	74.4%	76.3%
HYL/Energiron	22.9	21.7
Other Gas	2.7	2.0

Source: Midrex Technologies, Inc.

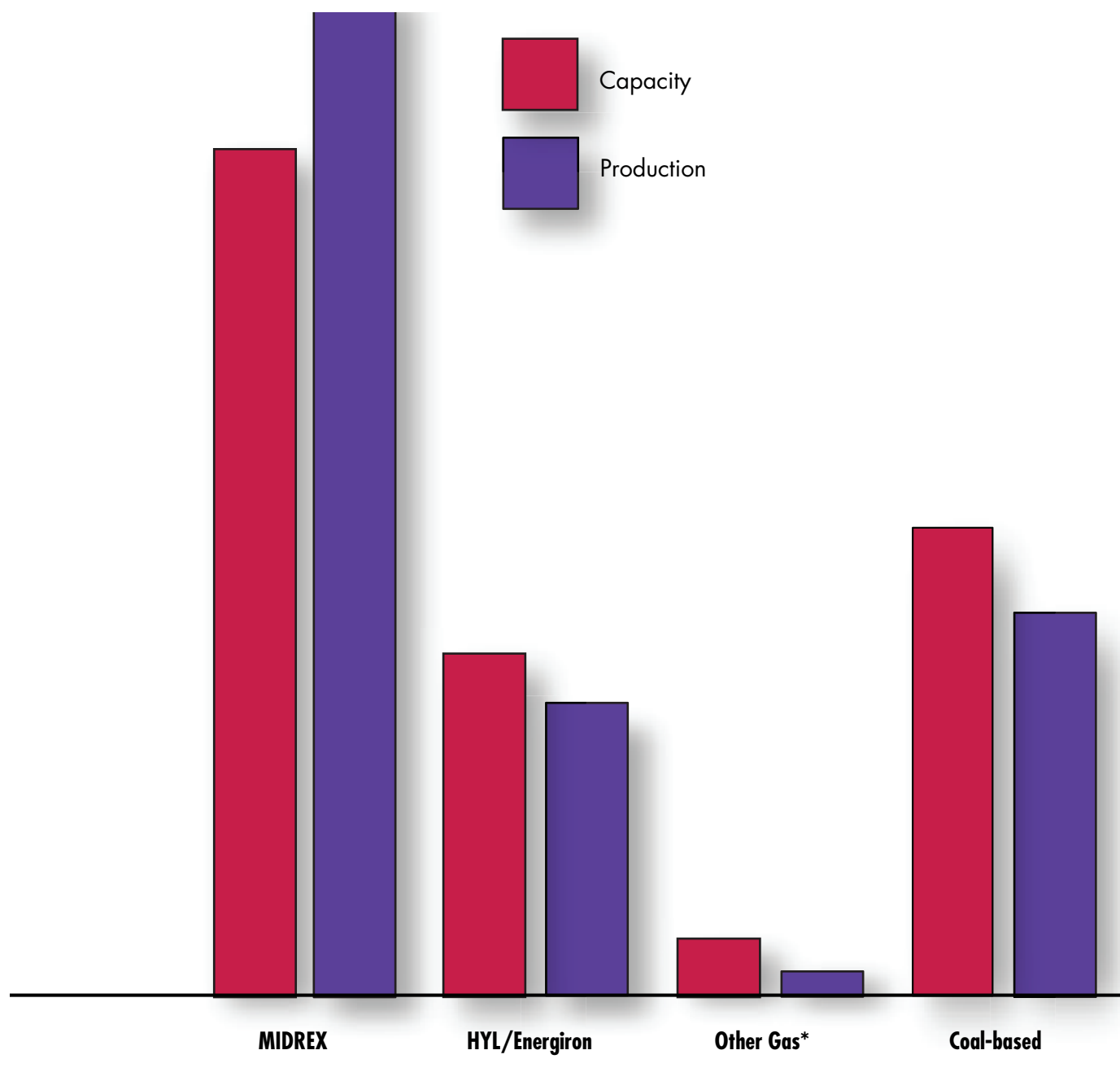
2007 World DRI Production by Region (Mt)



World DRI Production by Year (Mt)



2007 World Direct Reduction Capacity Utilization by Process



	MIDREX	HYL/Energiron	Other Gas*	Coal-based
Capacity (Mt/y)	32.4	13.2	2.2	18.1 estimated
Production (Mt)	38.4	11.3	1.0	14.9
Utilization (%)	118.5	85.7	47.7	82.0

NOTE: Installed capacity as of December 31, 2007.
 Production for calendar year 2007.
 Excludes plants starting up, or shutting down, in 2007.

*Production strongly impacted by availability of iron ore.

Source: Midrex Technologies, Inc.

Source: Midrex Technologies, Inc.

World DRI Production by Country (Mt)

NAME	'70-'87	'88	'89	'90	'91	'92	'93	'94	'95	'96
Latin America										
ARGENTINA	8.91	1.07	1.17	1.03	0.91	0.98	1.16	1.27	1.33	1.42
BRAZIL	3.58	0.20	0.26	0.29	0.29	0.29	0.25	0.22	0.30	0.34
MEXICO	24.95	1.68	2.18	2.48	2.47	2.44	2.73	3.24	3.70	3.90
PERU	0.39	0.05	0.05	0.04	0.03	0.03	-	0.02	0.003	0.02
TRINIDAD & TOBAGO	2.07	0.59	0.69	0.70	0.70	0.68	0.73	0.94	1.05	1.07
VENEZUELA	18.11	2.57	2.18	3.02	4.02	4.23	4.51	4.71	4.72	5.34
Middle East/N. Africa										
EGYPT	0.50	0.77	0.80	0.71	0.62	0.85	0.85	0.78	0.85	0.83
IRAN	0.18	0.03	0.09	0.29	0.70	0.83	1.65	2.63	3.23	3.81
IRAQ	-	0.02	0.17	0.17	-	-	-	-	-	-
LIBYA	-	-	0.09	0.50	0.78	0.85	0.94	0.85	0.97	0.83
QATAR	4.07	0.50	0.53	0.58	0.55	0.62	0.56	0.60	0.63	0.64
SAUDI ARABIA	4.28	1.08	1.21	1.09	1.12	1.61	2.01	2.11	2.13	2.30
Asia/Oceania										
AUSTRALIA	-	-	-	-	-	-	-	-	-	-
CHINA	-	-	-	-	-	-	-	-	-	-
INDIA	0.63	0.19	0.26	0.61	1.15	1.44	2.21	3.12	4.28	4.84
INDONESIA	6.31	1.02	1.26	1.41	1.43	1.37	1.50	1.62	1.86	1.80
JAPAN	0.05	-	-	-	-	-	-	-	-	-
MALAYSIA	1.73	0.50	0.64	0.62	0.62	0.55	0.71	0.99	1.09	1.48
MYANMAR	0.11	0.02	0.02	0.02	0.01	0.01	0.02	0.01	0.02	0.04
North America										
CANADA	8.72	0.77	0.71	0.73	0.56	0.63	0.74	0.77	1.01	1.42
US	6.57	0.29	0.29	0.39	0.41	0.39	0.44	0.48	0.46	0.45
Former USSR/Eastern Europe										
RUSSIA	2.82	1.60	1.70	1.69	1.70	1.58	1.54	1.71	1.68	1.50
Sub-Saharan Africa										
NIGERIA	0.86	0.14	0.13	0.11	0.12	0.05	0.04	0.04	0.02	0.02
SOUTH AFRICA	3.18	0.73	0.84	0.90	0.90	0.91	0.87	0.98	0.95	0.90
Western Europe										
GERMANY	4.61	0.27	0.35	0.31	0.26	0.17	0.18	0.28	0.41	0.37
ITALY	0.02	-	-	-	-	-	-	-	-	-
SWEDEN	0.04	-	-	-	-	-	-	-	-	-
WORLD TOTAL	105.54	14.09	15.63	17.68	19.32	20.51	23.65	27.37	30.67	33.30

World DRI Production by Process (Mt)

NAME	'70-'87	'88	'89	'90	'91	'92	'93	'94	'95	'96
MIDREX	52.69	8.87	9.56	10.73	11.96	13.26	15.91	17.83	19.86	21.03
HYL (including HYL I and HYL III)	40.40	3.76	4.44	5.25	5.40	5.29	5.73	7.01	8.15	9.12
Other Shaft Furnace/Retort Processes	0.41	0.05	0.07	0.06	0.16	0.02	0.02	0.01	0.04	0.15
Finmet	2.71	0.40	0.38	0.39	0.37	0.36	0.39	0.41	0.33	0.33
Other Fluidized Bed Processes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.12	0.11
SL/RN and other Rotary Kiln, Coal-based	9.33	1.01	1.20	1.25	1.43	1.57	1.61	2.13	2.17	2.56
Rotary Hearth, Coal-based	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
WORLD TOTAL	105.54	14.09	15.63	17.68	19.32	20.51	23.65	27.37	30.67	33.30

Source: Midrex Technologies, Inc.

World DRI Production by Country (Mt)

NAME	'97	'98	'99	'00	'01	'02	'03	'04	'05	'06	'07
Latin America											
ARGENTINA	1.50	1.54	0.99	1.42	1.28	1.46	1.74	1.74	1.83	1.95	1.81
BRAZIL	0.32	0.34	0.40	0.42	0.43	0.36	0.41	0.44	0.43	0.38	0.36
MEXICO	4.54	5.68	6.24	5.83	3.67	4.90	5.62	6.54	5.98	6.17	6.26
PERU	0.12	0.11	0.05	0.08	0.07	0.03	0.08	0.08	0.09	0.14	0.09
TRINIDAD & TOBAGO	1.24	1.14	1.30	1.53	2.31	2.32	2.28	2.36	2.25	2.08	3.47
VENEZUELA	5.36	5.06	5.05	6.69	6.38	6.89	6.90	7.83	8.95	8.61	7.71
Middle East/N. Africa											
EGYPT	1.19	1.61	1.67	2.11	2.37	2.53	2.87	3.02	2.90	3.10	2.79
IRAN	4.38	3.69	4.12	4.74	5.00	5.28	5.62	6.41	6.85	6.85	7.44
IRAQ	-	-	-	-	-	-	-	-	-	-	-
LIBYA	0.99	1.01	1.33	1.50	1.09	1.17	1.34	1.58	1.65	1.63	1.64
QATAR	0.57	0.71	0.67	0.62	0.73	0.75	0.78	0.83	0.82	0.88	1.30
SAUDI ARABIA	2.11	2.27	2.36	3.09	2.88	3.29	3.29	3.41	3.63	3.58	4.34
Asia/Oceania											
AUSTRALIA	-	-	0.32	0.56	1.37	1.02	1.95	0.69	-	-	-
CHINA	0.07	0.08	0.11	0.05	0.11	0.22	0.31	0.43	0.41	0.41	0.60
INDIA	5.26	5.26	5.22	5.44	5.59	6.59	7.67	9.37	12.04	14.74	19.06
INDONESIA	1.60	1.64	1.74	1.82	1.48	1.50	1.23	1.47	1.39	1.29	1.42
JAPAN	-	-	-	-	-	-	-	-	-	-	-
MALAYSIA	1.72	0.91	0.96	1.26	1.12	1.08	1.60	1.68	1.38	1.54	1.84
MYANMAR	0.04	0.04	0.03	0.04	0.04	0.04	0.04	0.04	-	-	-
North America											
CANADA	1.39	1.24	0.92	1.13	-	0.18	0.50	1.09	0.59	0.45	0.91
U.S.	0.51	1.60	1.67	1.56	0.12	0.47	0.21	0.18	0.22	0.24	0.25
Former USSR/Eastern Europe											
RUSSIA	1.73	1.55	1.88	1.92	2.51	2.91	2.91	3.14	3.34	3.28	3.41
Sub-Saharan Africa											
NIGERIA	-	-	-	-	-	-	-	-	-	0.15	0.20
SOUTH AFRICA	1.09	1.05	1.16	1.53	1.56	1.55	1.54	1.63	1.78	1.75	1.74
Western Europe											
GERMANY	0.47	0.45	0.40	0.46	0.21	0.54	0.59	0.61	0.44	0.58	0.59
ITALY	-	-	-	-	-	-	-	-	-	-	-
SWEDEN	-	-	-	-	-	-	-	-	-	-	-
WORLD TOTAL	36.19	36.96	38.59	43.78	40.32	45.08	49.45	54.60	56.99	59.79	67.22

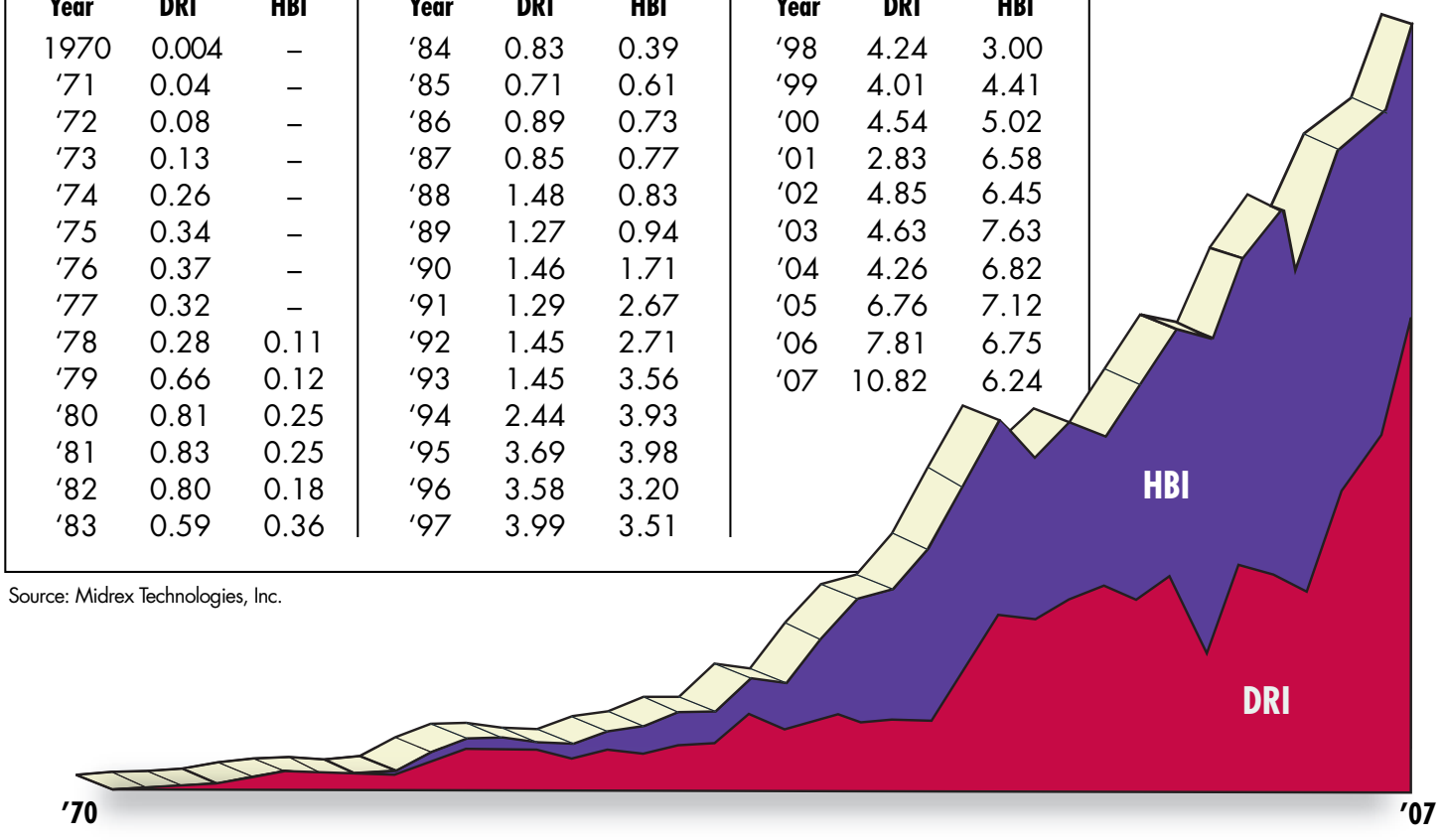
World DRI Production by Process (Mt)

NAME	'97	'98	'99	'00	'01	'02	'03	'04	'05	'06	'07
MIDREX	23.08	24.82	26.12	30.12	26.99	30.11	32.06	35.01	34.96	35.71	39.72
HYL (including HYL I and HYL III)	9.55	8.52	8.81	9.39	8.04	8.88	9.72	11.34	11.12	11.00	11.30
Other Shaft Furnace/Retort Processes	0.10	0.09	0.07	0.15	0.14	0.04	0.04	0.04	0.00	0.00	0.00
Finmet	0.36	0.39	0.66	0.96	1.80	1.63	2.57	1.60	1.32	1.31	1.05
Other Fluidized Bed Processes	0.12	0.01	0.00	0.00	0.13	0.00	0.00	0.02	0.20	0.00	0.00
SL/RN and other Rotary Kiln, Coal-based	3.01	3.12	2.94	3.14	3.18	4.43	5.04	6.41	9.17	11.53	14.90
Rotary Hearth, Coal-based	0.00	0.00	0.00	0.05	0.02	0.00	0.02	0.18	0.22	0.24	0.25
WORLD TOTAL	36.19	36.96	38.60	43.78	40.32	45.08	49.45	54.60	56.99	59.79	67.22

World DRI Shipments (Mt)

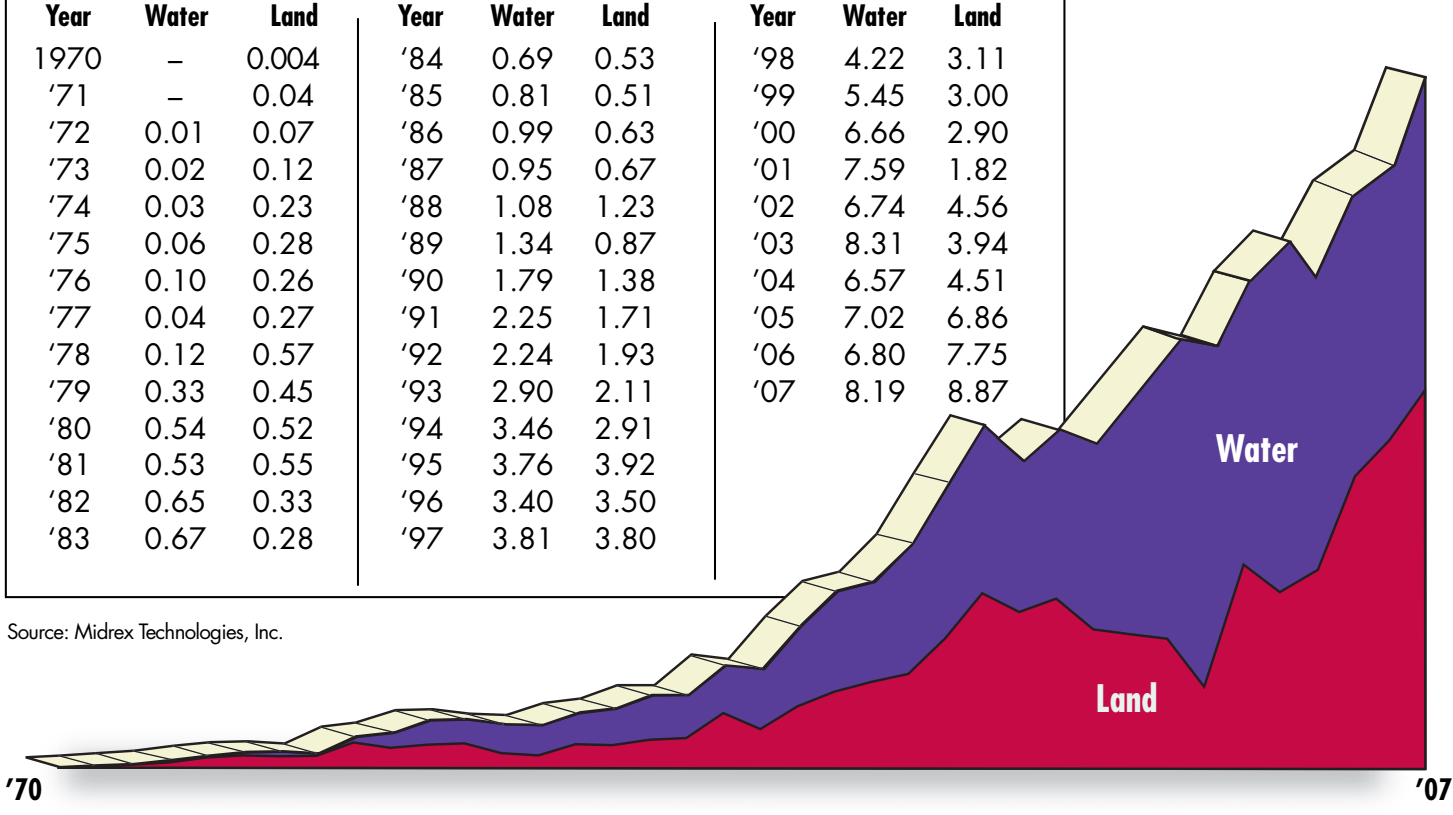
Year	DRI	HBI	Year	DRI	HBI	Year	DRI	HBI
1970	0.004	-	'84	0.83	0.39	'98	4.24	3.00
'71	0.04	-	'85	0.71	0.61	'99	4.01	4.41
'72	0.08	-	'86	0.89	0.73	'00	4.54	5.02
'73	0.13	-	'87	0.85	0.77	'01	2.83	6.58
'74	0.26	-	'88	1.48	0.83	'02	4.85	6.45
'75	0.34	-	'89	1.27	0.94	'03	4.63	7.63
'76	0.37	-	'90	1.46	1.71	'04	4.26	6.82
'77	0.32	-	'91	1.29	2.67	'05	6.76	7.12
'78	0.28	0.11	'92	1.45	2.71	'06	7.81	6.75
'79	0.66	0.12	'93	1.45	3.56	'07	10.82	6.24
'80	0.81	0.25	'94	2.44	3.93			
'81	0.83	0.25	'95	3.69	3.98			
'82	0.80	0.18	'96	3.58	3.20			
'83	0.59	0.36	'97	3.99	3.51			

Source: Midrex Technologies, Inc.



Year	Water	Land	Year	Water	Land	Year	Water	Land
1970	-	0.004	'84	0.69	0.53	'98	4.22	3.11
'71	-	0.04	'85	0.81	0.51	'99	5.45	3.00
'72	0.01	0.07	'86	0.99	0.63	'00	6.66	2.90
'73	0.02	0.12	'87	0.95	0.67	'01	7.59	1.82
'74	0.03	0.23	'88	1.08	1.23	'02	6.74	4.56
'75	0.06	0.28	'89	1.34	0.87	'03	8.31	3.94
'76	0.10	0.26	'90	1.79	1.38	'04	6.57	4.51
'77	0.04	0.27	'91	2.25	1.71	'05	7.02	6.86
'78	0.12	0.57	'92	2.24	1.93	'06	6.80	7.75
'79	0.33	0.45	'93	2.90	2.11	'07	8.19	8.87
'80	0.54	0.52	'94	3.46	2.91			
'81	0.53	0.55	'95	3.76	3.92			
'82	0.65	0.33	'96	3.40	3.50			
'83	0.67	0.28	'97	3.81	3.80			

Source: Midrex Technologies, Inc.



World Direct Reduction Plants

Status as of 12/31/07

Plant	Location	Capacity (Mt/y)	Modules	Product	Start-up	Status*
MIDREX® PROCESS						
ArcelorMittal Steel Hamburg	Hamburg, Germany	0.40	1	DRI	'71	O
ArcelorMittal Canada 1	Contrecoeur, Quebec, Canada	0.40	1	DRI	'73	O
TenarisSiderca	Campana, Argentina	0.40	1	DRI	'76	O
ArcelorMittal Canada 2	Contrecoeur, Quebec, Canada	0.60	1	DRI	'77	I
Ternium SIDOR I	Matanzas, Venezuela	0.35	1	DRI	'77	O
Acindar	Villa Constitucion, Argentina	0.60	1	DRI	'78	O
Qatar Steel I	Mesaieed, Qatar	0.40	1	DRI	'78	O
Ternium SIDOR II	Matanzas, Venezuela	1.29	3	DRI	'79	O
ArcelorMittal Steel Point Lisas I & II	Point Lisas, Trinidad & Tobago	0.84	2	DRI	'80/'82	O
Global Steel Holdings	Warri, Nigeria	1.02	2	DRI	'82	O
Hadeed A & B	Al-Jubail, Saudi Arabia	0.80	2	DRI	'82/'83	O
OEMK	Stary Oskol, Russia	1.67	4	DRI	'83/'85/'85/'87	O
Antara Steel Mills	Labuan Island, Malaysia	0.65	1	HBI	'84	O
Khouzestan Steel Co.	Ahwaz, Iran	1.84	4	DRI	'89/'90/'92/'01	O
EZDK I	El Dikheila, Egypt	0.72	1	DRI	'86	O
LISCO 1 & 2	Misurata, Libya	1.10	2	DRI	'89/'90	O
Essar Steel I & II	Hazira, India	0.88	2	HBI/HDRI	'90	O
Ferrominera Orinoco	Puerto Ordaz, Venezuela	1.00	1	HBI	'90	O
VENPRECAR	Matanzas, Venezuela	0.82	1	HBI	'90	O
Essar Steel III	Hazira, India	0.44	1	HBI/HDRI	'92	O
Hadeed C	Al-Jubail, Saudi Arabia	0.65	1	DRI	'92	O
Mobarakeh Steel A - E	Mobarakeh, Iran	3.20	5	DRI	'92/'93/'94	O
Ispat Industries, Ltd.	Raigad, India	1.00	1	DRI	'94	O
EZDK II	El Dikheila, Egypt	0.80	1	DRI	'97	O
LISCO 3	Misurata, Libya	0.65	1	HBI	'97	O
ArcelorMittal Steel Lázaro Cárdenas	Lázaro Cárdenas, Mexico	1.20	1	DRI	'97	O
COMSIGUA	Matanzas, Venezuela	1.00	1	HBI	'98	O
ArcelorMittal Steel Point Lisas III	Point Lisas, Trinidad & Tobago	1.36	1	DRI	'99	O
ArcelorMittal Steel South Africa	Saldanha Bay, South Africa	0.80	1	DRI	'99	O
EZDK III	El Dikheila, Egypt	0.80	1	DRI	'00	O
Essar Steel IV	Hazira, India	1.00	1	HBI/HDRI	'04	O
Nu-Iron	Point Lisas, Trinidad & Tobago	1.60	1	DRI	'06	O
Essar Steel V	Hazira, India	1.50	1	HBI/HDRI	'06	O
Mobarakeh Steel F	Mobarakeh, Iran	0.80	1	DRI	'06	O
DRIC	Dammam, Saudi Arabia	1.00	2	DRI	'07	O
Hadeed E	Al-Jubail, Saudi Arabia	1.76	1	HDRI/DRI	'07	O
Lebedinsky GOK II	Gubkin, Russia	1.40	1	HBI	'07	O
Qatar Steel II	Mesaieed, Qatar	1.50	1	HDRI/HBI	'07	O
Khouzestan Steel V	Ahwaz, Iran	0.80	1	DRI	'08	C
The Lion Group	Banting, Malaysia	1.54	1	HDRI/HBI	'08	C
Shadeed	Sohar, Oman	1.50	1	HDRI/HBI	'08	C
Tuwairqi Steel Mills	Karachi, Pakistan	1.28	1	HDRI/DRI	'08	C
HOSCO	Bandar Abbas, Iran	0.80	2	DRI	'09	C
IMPADCO	Khorasan (Mashad), Iran	0.80	1	DRI	'09	C
ESISCO	Sadat City, Egypt	1.76	1	HDRI/DRI	'10	C
IGISCO	Ardakan (Yazd), Iran	0.80	1	DRI	'10	C
		47.52	65			

Source: Midrex Technologies, Inc.

* Status Codes: O – Operating I – Idle C – Construction

World Direct Reduction Plants

Status as of 12/31/07

Plant	Location	Capacity (Mt/y)	Modules	Product	Start-up**	Status*
<u>HYL/ENERGIRON PROCESS</u>						
PT Krakatau Steel 1	Cilegon, Indonesia	0.56	1	DRI	'78	I
PT Krakatau Steel 2	Cilegon, Indonesia	0.56	1	DRI	'78	I
Ternium Sidor H2	Matanzas, Venezuela	1.40	3	DRI	'81	O
Ternium Hylsa 3M5	Monterrey, Mexico	0.50	1	DRI	'83	O
ArcelorMittal Lázaro Cárdenas I	Lázaro Cárdenas, Mexico	1.00	2	DRI	'88	O
ArcelorMittal Lázaro Cárdenas II	Lázaro Cárdenas, Mexico	1.00	2	DRI	'91	O
Vikram Ispat	Raigad, India	0.75	1	HBI/DRI	'93	I
PT Krakatau Steel	Cilegon, Indonesia	1.35	2	DRI	'93	O
Khouzestan Steel (ASCO)	Ahwaz, Iran	1.03	3	DRI	'93	O/I
Perwaja Steel	Kemaman, Malaysia	1.20	2	DRI	'93	O
Usiba	Salvador Bahia, Brazil	0.31	1	DRI	'94	O
Ternium Hylsa 2P5	Puebla, Mexico	0.61	1	DRI	'95	O
Ternium Hylsa 4M	Monterrey, Mexico	0.68	1	DRI	'98	O
Lebedinsky GOK	Gubkin, Russia	0.90	1	HBI	'99	O
Hadeed D	Al-Jubail, Saudi Arabia	1.10	1	DRI	'99	O
Tenaris Matesi	Matanzas, Venezuela	1.50	2	HBI	'04	O
Vikram Ispat 2	Raigad, India	0.60	1	DRI	'07	O
Gulf Sponge Iron (Al Nasser)	Abu Dhabi, UAE	0.20	1	DRI	'08	C
Ternium Sidor	Matanzas, Venezuela	0.80	1	DRI	'08	C
Emirates Steel Industries (GHC)	Abu Dhabi, UAE	1.60	1	DRI	'09	C
Suez Steel	Egypt	1.95	1	DRI	'10	C
Emirates Steel Industries (GHC)	Abu Dhabi, UAE	1.60	1	DRI	'11	C
		21.20	31			
<u>FINMET PROCESS</u>						
Orinoco Iron	Matanzas, Venezuela	2.20	4	HBI	'00	O
		2.20	4			
<u>SL/RN PROCESS</u>						
Piratini	Charquedas, Brazil	0.06	1	DRI	'73	I
SIIL	Paloncha, India	0.06	2	DRI	'80/'85	O
Siderperu	Chimbote, Peru	0.10	3	DRI	'80	I
ISCOR	Vanderbijlpark, South Africa	0.72	4	DRI	'84	O
Bihar Sponge Iron, Ltd.	Chandil, India	0.15	1	DRI	'89	O
Prakash Industries	Champa, India	0.40	2	DRI	'93/'96	O
Nova Iron & Steel	Bilaspur, India	0.15	1	DRI	'94	O
Sree Metalics	Keonjhar, India	0.06	3	DRI	'99/'00	O
Ashirwad	Jamshedpur, India	0.05	2	DRI	'00	O
Ashirwad	Hyderabad, India	0.03	1	DRI	'00	O
Vandana Global	Siltara, Raigarh, India	0.05	1	DRI	'00	O
		1.83	21			
<u>JINDAL PROCESS</u>						
Jindal Steel & Power	Raigarh, India	0.90	6	DRI	'93/'94/'95/'96/'00	O
Monnet Ispat	Raipur, India	0.30	2	DRI	'93/'98	O
Rexon Strips Ltd.	Via Lathikata, India	0.06	2	DRI	'93/'00	O
		1.26	10			
<u>DRC PROCESS</u>						
Scaw Metals I	Germiston, South Africa	0.18	2	DRI	'83/'89	O
Scaw Metals II	Germiston, South Africa	0.15	1	DRI	'97	O
Tianjin Iron & Steel	Tianjin, China	0.30	2	DRI	'97	O
		0.63	5			

Source: Midrex Technologies, Inc.

* Status Codes: O – Operating I – Idle C – Construction

World Direct Reduction Plants

Status as of 12/31/07

Plant	Location	Capacity (Mt/y)	Modules**	Product	Start-up**	Status**/***
<u>CODIR PROCESS</u>						
Dunswart	Benoni, South Africa	0.15	1	DRI	'73	0
Sunflag	Bhandara, India	0.15	1	DRI	'89	0
Goldstar	Mallividu, India	0.22	2	DRI	'92	1
		0.52	4			
<u>CIRCORED PROCESS</u>						
Mittal - ISG Trinidad	Point Lisas, Trinidad & Tobago	0.50	1	HBI	'99	1
<u>IRON DYNAMICS PROCESS</u>						
Iron Dynamics	Butler, IN, USA	0.50	1	DRI	'98	0
<u>FIOR PROCESS</u>						
Operaciones rDI	Matanzas, Venezuela	0.40	1	HBI	'76	1
<u>PUROFER PROCESS</u>						
ASCO	Ahwaz, Iran	0.33	1	DRI	'77	1
<u>SIIL PROCESS</u>						
Bellary Steel & Alloys	Bellary, Karnetaka, India	0.06	2	DRI	'92/'93	0
HEG	Borai, India	0.09	2	DRI	'92	0
Kumar Met.	Nalgonda, India	0.06	2	DRI	'93	0
Raipur Alloys & Steel	Raipur, India	0.06	2	DRI	'93	0
Tamilnadu Sponge	Salem, India	0.03	1	DRI	'93	0
Aceros Arequipa	Pisco, Peru	0.08	2	DRI	'96	0
		0.38	11			
<u>OSIL PROCESS</u>						
OSIL	Keonjhar, Orissa, India	0.10	1	DRI	'83	0
Lloyd's Metals & Eng.	Ghugus, India	0.15	1	DRI	'95	0
		0.25	2			
<u>TISCO PROCESS</u>						
Tata Sponge Iron, Ltd.	Keonjhar, Orissa, India	0.24	2	DRI	'86/'98	0
Vallabh Steels	Ludhiana, Punjab, India	0.12		DRI		0
		0.36				
<u>DAV PROCESS</u>						
Davsteel	Cullinan, South Africa	0.04	1	DRI	'85	
<u>KINGLOR-METOR PROCESS</u>						
No. 3 Mining Enterprise	Maymyo, Myanmar	0.04	2	DRI	'81/'84	
<u>POPURI PROCESS</u>						
Adhunik	Durgapur, India	0.16	2	DRI		0
Ambey Metallics	Panjim, Goa, India	0.46		DRI		0
Deepak	Orissa, India	0.05	4	DRI	'91-'02	0
Kusum Powermet	Keonjhar, Orissa, India	0.03		DRI		0
Neepaz Metallics	Rourkela, India	0.06		DRI		0
Rashmi Cement	Midnapore, Pim, India	0.06		DRI		0
Rashmi Ispat	Midnapore, Pim, India	0.06		DRI		0
Singhal Enterprises	Kolkota, India	0.14		DRI		0
		1.02				

* Status Codes: 0 – Operating 1 – Idle C – Construction
 ** Blanks indicate insufficient information

Source: Midrex Technologies, Inc.

World Direct Reduction Plants

Status as of 12/31/07

Plant	Location	Capacity (Mt/y)	Modules**	Product	Start-up**	Status*
OTHER						
Aryavrata Trading	Jhargram, Pim, India	0.01		DRI		0
Howrah Gasses	Kolkota, India	0.03		DRI		0
Ind Agro Synergy	Nagpur, India	0.10		DRI		0
Ispat Godawari	Siltara, Raigarh, India	0.10		DRI		0
Jai Balaji Sponge	Kolkota, India	0.11		DRI		0
Nalwa Sponge Iron	Raigarh, India	0.20		DRI		0
Rungta Mines	Chaibasa, India	0.03		DRI		0
SCAN	Ramabahal, India	0.04	2	DRI	'99-'00	0
Shyam Sel	Raniganj, West Bengal, India	0.10		DRI		0
Suryaa	Bhubaneshwar, Orissa, India	0.02	1	DRI	'96	0
Others	India and China	2.50 (see Note 3)		DRI		0

Note 1: This list does not include plants that are inoperable or that have been dismantled.

Note 2: This list does not include plants that primarily process iron-bearing waste streams.

Note 3: It is estimated that there are more than 300 small rotary kilns with capacities of 10,000 to 30,000 tons per year operating in India. Approximately 100 were installed within the past year

* Status Codes: 0 – Operating 1 – Idle C – Construction

** Blanks indicate insufficient information

Source: Midrex Technologies, Inc.

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Midrex Technologies, Inc. compiles world DRI production data on an annual basis as a service to industry.

Direct reduced iron (DRI) is a high quality metallic product produced from iron ore that is used as a feedstock in electric arc furnaces, blast furnaces and other iron and steelmaking applications. Hot briquetted iron (HBI) is a compacted form of DRI designed for ease of shipping, handling, and storage.

Midrex Technologies, Inc. is an international process engineering and technology company that provides global process technology solutions to various industries and is principally known for the MIDREX® Direct Reduction Process that converts iron ore into a high-purity DRI or HBI for use in steelmaking, ironmaking, and foundry applications. Midrex continues to develop new technologies relating to its traditional iron and steel roots including eco-friendly technologies such as FASTMET®/FASTMELT® steel waste recycling processes and ITmk3®, a breakthrough process for producing a pig iron substitute material.

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Aceros Arequipa – Peru, HYL – Mexico, Iron Dynamics – USA, Orinoco Iron – Venezuela, Scaw Metals – South Africa, Sponge Iron Manufacturers Association – India, Siemens VAI – Austria, All Individual MIDREX® Direct Reduction Plants

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